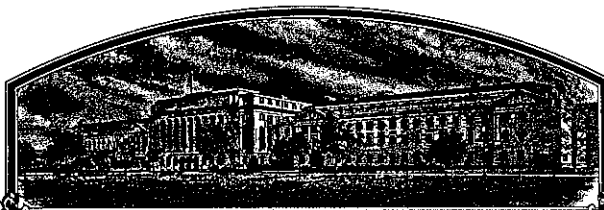


No.

8500125



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DeKalb-Pfizer Genetics

Whereas, THERE HAS BEEN PRESENTED TO THE

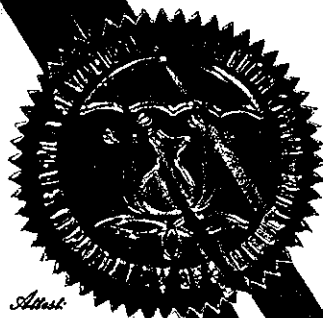
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY, AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'78004'



Attest

Kenneth E. Lyng
Commissioner
Plant Variety Protection
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 30th day of April in the year of our Lord one thousand nine hundred and eighty-six.

Richard E. Lyng
Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY 78004		1b. VARIETY NAME 78004		FOR OFFICIAL USE ONLY PV NUMBER 8500125	
2. KIND NAME Corn		3. GENUS AND SPECIES NAME Zea Mays		FILING DATE 4/26/85	TIME 3:30 P.M.
4. FAMILY NAME (BOTANICAL) Gramineae		5. DATE OF DETERMINATION Summer 1980		FEE RECEIVED \$ 1,800 \$ 200	DATE 4/26/85 3/24/86
6. NAME OF APPLICANT(S) DeKalb-Pfizer Genetics		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 3100 Sycamore Road DeKalb, IL 60115		8. TELEPHONE AREA CODE AND NUMBER	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) General Partnership			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Waddell A. Biggart, Esq., Sughrue, Mion, Zinn, Macpeak & Seas, 1776 K St., N.W. D.C. 20006; Eric Christophersen, Esq., 3100 Sycamore Road, DeKalb, Illinois 60115; *Dr. James H. Monroe, Legal Division, Pfizer Genetics, 235 E. 42nd St., N.Y., N.Y. 10017 (212) 573-2369					
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:					
<input checked="" type="checkbox"/> 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
<input checked="" type="checkbox"/> 13B. Exhibit B, Novelty Statement.					
<input checked="" type="checkbox"/> 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)					
<input checked="" type="checkbox"/> 13D. Exhibit D, Additional Description of the Variety.					
<input checked="" type="checkbox"/> 13E. EXHIBIT E, OWNERSHIP STATEMENT PJS					
14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☐ YES ☒ NO

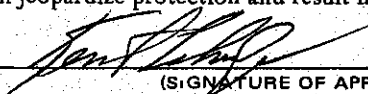
17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

4/19/85

(DATE)



(SIGNATURE OF APPLICANT)

Vice President

DEKALB-PFIZER GENETICS

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (1-78) NOTE: *Please address correspondence to Dr. James H. Monroe, N.Y., N.Y.

Exhibit A - Origin and Breeding History of Dent Corn Inbred 78004

- Summer 1977: The cross B73(Iowa Stiff Stalk Synthetic) x A634 (Mt42 x B14 BC3) was made at Dayton, Iowa. S0 generation seed from the harvested ears was bulked. (1977 Nursery cross number 1670 x NC69. B73 was row 1670 and A634 was row NC69).
- Winter 1977: Seed of the S0 generation cross was sent to Homestead, Florida, for self pollination. All harvested ears were returned to Dayton, Iowa, shelled and the S1 generation seed bulked. (1977 Winter nursery row number 1897).
- Summer 1978: The S1 generation seed was planted at Dayton, Iowa, in a single row and the plants were self pollinated. Three self pollinated ears (S2 generation seed) were harvested, shelled separately, and the S2 seed maintained separately. (1978 Nursery row number 4767).
- Winter 1978: S2 generation seed of ear number one (of three harvested) was planted at Homestead, Florida, in a five row block and the plants self pollinated. Five self pollinated ears were harvested and returned to Dayton, Iowa. Seed of each ear was shelled separately and the S3 generation seed maintained separately. (1978 Winter nursery rows 962-966).
- Summer 1979: S3 generation seed of ear number two (of the five harvested) was planted at Dayton, Iowa, in a two row block and the plants self pollinated. Four self pollinated ears were harvested, shelled separately and the S4 generation seed maintained separately. (1979 Nursery rows 4087-4088).

Winter 1979: S4 generation seed of ear number one (of the four harvested) was planted at Homestead, Florida, in a single row and the plants self pollinated. Two self pollinated ears were harvested and returned to Dayton, Iowa. Seed from each ear was shelled separately and the S5 generation seed maintained separately. (1979 Winter nursery row 85).

Summer 1980: S5 generation seed from ear number one (of the two harvested) was planted at Dayton, Iowa, in a single row and the plants self pollinated. Four ears were harvested and shelled separately, and the S6 generation seed maintained separately. (1980 Nursery row 3086). The seed from ear number one was coded 78004. The complete selfing pedigree of 78004 at the S6 generation was S6-1-2-1-1-1.

Winter 1980: S6 generation seed of 78004 was planted at Homestead, Florida, and the plants self pollinated. Fourteen ears were harvested, returned to Dayton, Iowa, and the shelled seed bulked. (1980 Winter nursery row 433).

Summer 1981

to Present: A pure source of 78004 has been maintained by self pollination and bulking seed from selected ears from each generation.

The initial cross of B73 x A634 and the selection in each of the segregating generations up to and including the coding of 78004 was made by Dr. M.F. Lindsey.

Appendium to DPG 8508C, Corn Inbred 78004, PC 6941

Statement of Uniformity

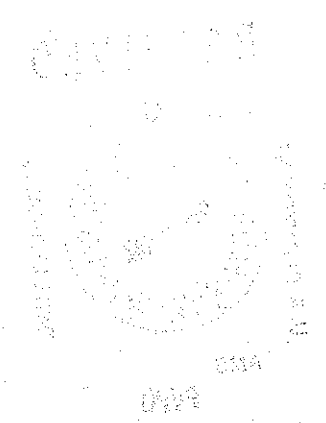
This inbred was assigned the code 78004 after 6 generations of selfing and was judged uniform for breeding use. 78004 has been reproduced and judged uniform for breeding use in winter and summer programs for an additional 5 generations.

Statements of Variants

Ears that are non-rounded at the tip (referred to as fasciation) occur with 5% frequency. The influence of environment can alter both the frequency and degree of expression of this characteristic variant of 78004.

Marvin Lindsey

Marvin Lindsey
Sr. Principal Corn Breeder & Area Director



03310/3/002

DEKALB - PFIZER GENETICS

8500125 REC'D DEC 27 1983

Applicant

1025 OAK ST
DEKALB IL 60115

78004, Exhibit A, Appendum I.

TEST Date DECEMBER 15, 1983

Test No. 409061

Lot No. 27N059

Kind & Variety (Producers Declaration)
FOUNDATION BR118

CORN

F5

THIS SAMPLE MEETS CERTIFICATION REQUIREMENTS BASED ON SOURCE OF SEED,
FIELD INSPECTION AND LABORATORY ANALYSIS

GERMINATION REPORT: 400 Seeds

Germination	%	Strong	%	Cold Test	%
Hard Seed	%	Pod & Stem Blight	%	A-A Test	%
Dead Seed	%	Other Diseases	%	Tetrazolium	%

PURITY REPORT:

Pure Seed	99.96	%	Test Weight	65.60	LBS.
Weed Seeds	.00	%	Moisture	11.50	%
Other Crop Seeds	.00	%	Total Weight of Sample Examined	500.00	
Total Inert Matter	.04	%			
Broken Seed	.03	%			
Other Inert	.01	%			

Dockage from 1,000 grams:

Noxious Weeds	Other Weed Seeds
NONE FOUND	NONE FOUND
Other Crop Seeds	Inert Matter
NONE FOUND	BROKEN SEED CHAFF

EMARKS:


This certifies that the sample of seed submitted of the lot designated above has been analyzed in accordance with
the RULES FOR SEED TESTING AS ADOPTED BY THE ASSOCIATION OF OFFICIAL SEED ANALYSTS.
VIGOR TESTING INFORMATION CANNOT BE USED FOR LABELING PURPOSES.

ILLINOIS CROP IMPROVEMENT ASSOCIATION, INC.

508 South Broadway, Urbana, Illinois 61801

Telephone: 217-367-4053


Registered Seed Technologist


Manager

M 3-0881

DECEMBER 19, 1983

REC'D FEB 14 1985

5

78004

Exhibit B. Novelty Statement.

78004 is a yellow dent corn inbred line derived from a single cross (B73 x A634). The public line that is most closely related to 78004 is A634.

78004 is significantly different from A634 in plant height (195.37 vs. 207.70), ear height (78.91 vs. 99.29), ear length (15.20 vs. 14.06) and ear diameter (39.51 vs. 37.17). (See Exhibit B, Appendix I).

The line 78004 is also significantly different in maturity from A634. 78004 is flowering later than A634.

Additional distinguishing differences are: the sheath pubescence of 78004 is heavy and the sheath pubescence of A634 is medium, the silk color of 78004 is pink and the silk color of A634 is purple. (See Exhibit C).

78004

Exhibit B. Novelty Statement

Appendium I.

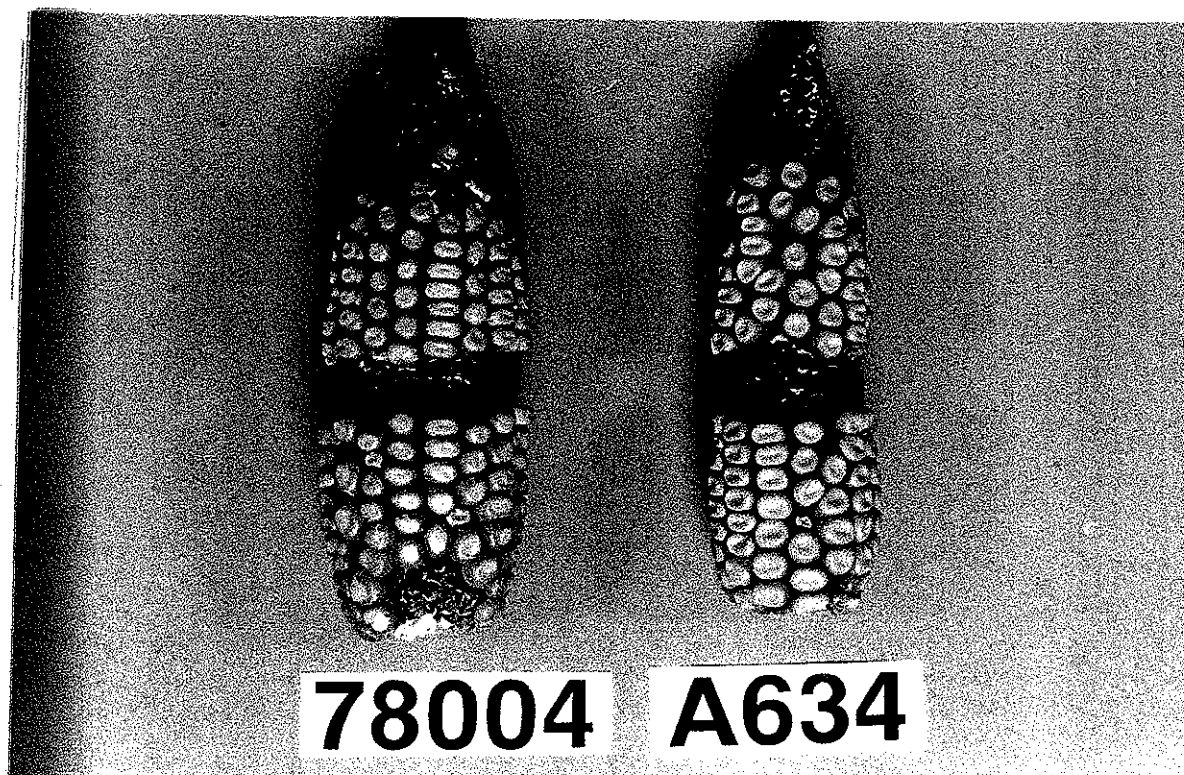
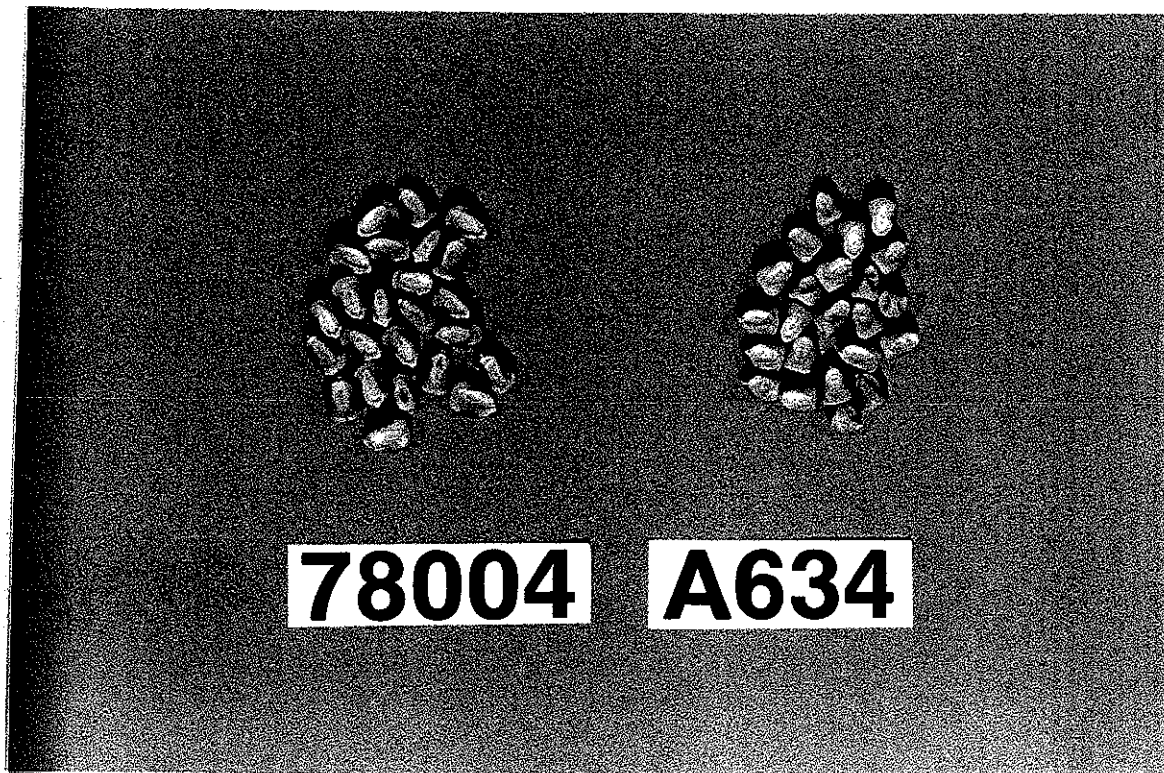
78004 vs. A634

Plant and ear Characteristics	78004	A634	Testing Hypothesis
			$H_0: \mu_1 = \mu_2$ $H_A: \mu_1 \neq \mu_2$
1. Plant height (cm)	195.37	209.71	Sig. ($\alpha = 0.1$)
2. Ear height (cm)	78.91	99.29	Sig. ($\alpha = 0.1$)
3. Ear length (cm)	15.20	14.06	Sig. ($\alpha = 0.1$)
4. Ear diameter (mm)	39.51	37.17	Sig. ($\alpha = 0.1$)
5. Ear weight (gm)	64.26	70.18	Not Sig. ($\alpha = 0.1$)

- 1) $n_1 \neq n_2$
- 2) Detailed calculations are available.

78004

13B. Exhibit B. Novelty Statement, Appendum II.



78004 and A634 have a dent kernel and red cob color. The ear diameter of 78004 is significantly larger than A634.

78004

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-28
(2-15-74)UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782EXHIBIT C
(Corn)OBJECTIVE DESCRIPTION OF VARIETY
CORN (ZEA MAYS)

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
	PVPO NUMBER 8500125
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	VARIETY NAME OR TEMPORARY DESIGNATION
	78004

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. 089 or 09) when number is either 99 or less or 9 or less.

1. TYPE:

2 1 = SWEET 2 = DENT 3 = FLINT 4 = FLOUR 5 = POP 6 = ORNAMENTAL

2. REGION WHERE BEST ADAPTED IN THE U.S.A.:

2 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST
5 = SOUTHCENTRAL 6 = SOUTHWEST 7 = MOST REGIONS

3. MATURITY (In Region of Best Adaptability):

(Under "omments" (pg. 3) state how heat units were calculated)

9	2	DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK	1	5	8	7	HEAT UNITS
		DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY					HEAT UNITS
6	7	DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE	1	3	4	0	HEAT UNITS

4. PLANT:

1 9 5 CM. HEIGHT (To tassel tip) 0 7 9 CM. EAR HEIGHT (To base of top ear)
1 2 CM. LENGTH OF TOP EAR INTERNODE

Number of Tillers:

1 1 = NONE 2 = 1-2 3 = 2-3 4 = > 3

Number of Ears Per Stalk:

1 1 = SINGLE 2 = SLIGHT TWO-EAR TENDENCY
3 = STRONG TWO-EAR TENDENCY 4 = THREE-EAR TENDENCY

Cytoplasm Type:

1 1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = OTHER (Specify)

5. LEAF (Field Corn Inbred Examples Given):

Color:

1 1 = LIGHT GREEN (HY) 2 = MEDIUM GREEN (WF9) 3 = DARK GREEN (B14) 4 = VERY DARK GREEN (K166)

Angle from Stalk (Upper half):

2 1 = < 30° 2 = 30-60° 3 = > 60°

Sheath Pubescence:

3 1 = LIGHT (W22) 2 = MEDIUM (WF9)
3 = HEAVY (OH26)

Marginal Waves:

2 1 = NONE (HY) 2 = FEW (WF9) 3 = MANY (OH7L)

Longitudinal Creases:

2 1 = ABSENT (OH51) 2 = FEW (OH56A)
3 = MANY (PA11)

Width:

0 8 CM. WIDEST POINT OF EAR NODE LEAF

Length:

0 8 4 CM. EAR NODE LEAF

2 1 NUMBER OF LEAVES PER MATURE PLANT

A. TASEL:

NUMBER OF LATERAL BRANCHES

Branch Angle from Central Spike:

1 = < 30° 2 = 30-40° 3 = > 40°

Paniculate Length:

CM. FROM TOP LEAF TO BASAL BRANCHES

Pollen Size:

1 = LIGHT (WF9) 2 = MEDIUM 3 = HEAVY (KY21)

Anther Color: } 1 = YELLOW 2 = PINK 3 = RED 4 = PURPLE 5 = GREEN
 Glume Color: } 6 = OTHER (Specify) _____

Pollen Retention for Cytosperms (0 = Not Tested, 1 = Partial, 2 = Good)

☐ "T" ☐ "G" ☐ "C" ☒ OTHER (Specify Cytosperm and degree of retention) Not tested.

7. EAR (Harvest Ear Data Except When Stated Otherwise):

CM LENGTH MM MID-POINT DIAMETER GM. WEIGHT

Kernel Rows:

1 = INDISTINCT 2 = DISTINCT NUMBER

1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = SPIRAL

Ear Color (Exposed or Shelling Stage):

1 = GREEN 2 = PINK 3 = SALMON 4 = RED

Husk Color:

FRESH } 1 = LIGHT GREEN 2 = DARK GREEN 3 = PINK
 DRY } 4 = RED 5 = PURPLE 6 = BUFF

Husk Extension: (Harvest Stage)

1 = SHORT (Ears Exposed) 2 = MEDIUM (Glumes Covering Ear)
 3 = LONG (8-10CM Beyond Ear Tip)
 4 = VERY LONG (> 10 CM)

Husk Length:

1 = SHORT (< 8 CM) 2 = MEDIUM (8-15 CM)
 3 = LONG (> 15 CM)

Shank:

CM LONG NO. OF INTERNODES

Position of Dry Husk Stage:

1 = UPRIGHT 2 = HORIZONTAL 3 = PENDENT

Tassel:

1 = SLIGHT 2 = AVERAGE 3 = EXTREME

Drying Time (Unshelled Ear):

1 = SLOW 2 = AVERAGE 3 = FAST

B. KERNEL (Dry):

Size (From Ear Mid-Point):

MM LONG MM WIDE MM THICK

Shape Events (% Recessed)

1 = < 20 2 = 20-40 3 = 40-60 4 = 60-80 5 = > 80

8. KERNEL (Dried) :

8500125

Pericarp Color: 1 = COLORLESS 2 = RED-WHITE 3 = TAN 4 = BRONZE
 5 = BROWN 6 = LIGHT RED 7 = CHERRY RED
 8 = VARIEGATED (Describe) _____

Aleurone Color: 1 = HOMOZYGOUS 2 = SEGREGATING (Describe) _____

1 = WHITE 2 = PINK 3 = TAN 4 = BROWN 5 = BRONZE 6 = RED
 7 = PURPLE 8 = PALE PURPLE 9 = VARIEGATED (Describe) _____

and Endosperm Color: 1 = WHITE 2 = PALE YELLOW 3 = YELLOW 4 = PINK-ORANGE 5 = WHITE CAP.

Endosperm Type:

1 = SWEET (su1) 2 = EXTRA SWEET (sh2) 3 = NORMAL STARCH 4 = HIGH AMYLOSE STARCH
 5 = WAXY STARCH 6 = HIGH PROTEIN 7 = HIGH LYSINE 8 = OTHER (Specify) _____

GM. WEIGHT /100 SEEDS (Unsize Sample)

9. COB:

MM. DIAMETER AT MID-POINT

Strength:

1 = WEAK 2 = STRONG

Color:

1 = WHITE 2 = PINK 3 = RED 4 = BROWN
 5 = VARIEGATED 6 OTHER (Specify) _____

10. DISEASE RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text" value="0"/> STALK ROT (Diplodia)	<input type="text" value="0"/> STALK ROT (Fusarium)	<input type="text" value="0"/> STALK ROT (Gibberella)
<input type="text" value="2"/> NORTHERN LEAF BLIGHT	<input type="text" value="1"/> SOUTHERN LEAF BLIGHT	<input type="text" value="0"/> SMUT
<input type="text" value="0"/> SOUTHERN RUST	<input type="text" value="0"/> CORN SMUT	<input type="text" value="0"/> BACTERIAL WILT
<input type="text" value="0"/> BACTERIAL LEAF BLIGHT	<input type="text" value="0"/> MAIZE DWARF MOSAIC	<input type="text" value="0"/> STUNT
<input type="text"/> OTHER (Specify) Anthracnose (foliar phase)-2; Eyespot -2		

11. INSECT RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text" value="1"/> CORNBORER	<input type="text" value="0"/> EARWORM	<input type="text" value="0"/> SAPBEETLE	<input type="text"/> APHID
<input type="text" value="0"/> ROOTWORM (Northern)	<input type="text" value="0"/> ROOTWORM (Western)		
<input type="text" value="0"/> ROOTWORM (Southern)	<input type="text" value="0"/> OTHER (Specify) _____		

12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN:

CHARACTER	VARIETY	CHARACTER	VARIETY
Maturity	A634	Kernel Type	
Plant Type	A634	Quality (Edible)	
Ear Type	A634	Usage	

REFERENCES:

- U.S. Department Agriculture. Yearbook 1937.
 Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous Authors)
 Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Maize. Cornell A.E.S., Mem. 180. 1935.
 The Mutants of Maize. 1968. Crop Science Society of America. Madison, Wisconsin.
 Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S. Bul. 831. 1959.
 Butler, D.R. 1954 - A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University.

COMMENTS: Heat Unit Calculations:

$$GDD = \frac{\text{Daily max. temp. } (\leq 86^{\circ}\text{F}) + \text{Daily min. temp. } (\geq 50^{\circ}\text{F})}{2} - 50^{\circ}\text{F}$$

11

Exhibit D.

Additional Description of the Variety.

The isozyme analysis of 78004 and A634Ht shows genetic differences at three different loci: Acph - 2 vs. 4, IBHB - 4 vs. 6 and MDHB - 3.5 vs. 6.

(See Exhibit D, Appendix I).



Exhibit D.

Additional Description of the Variety

Appendium I.

Isozyme Analysis of 78004 vs. A634Ht

LOCUS	Alleles Present	
	78004	A634Ht
# of plants assayed	6	6
ACPH	2	4
ADH	4	4
Cat	9	9
EP	6	6
GOT U	4	4
GOT M	4	4
GOT L	4	4
B-GLu	7	7
IDH A	4	4
IDH B	4	6
MDH A	6*	6*
MDH B	3.5	6
MDH C	16	16
MDH D	12	12
MDH E	12	12
PGM A	9	9
PGM B	4	4
PHI	5	5

* Alleles is probably 6 but null cannot be ruled out.

The technique of using isozymes for genotyping or "fingerprinting" is described by the following reference:

Goodman, M. M. and C. W. Stuber. 1980
Genetic identification of lines and crosses using isoenzyme electrophoresis. Proceedings of the Thirty-fifth Annual Corn and Sorghum Industry Research Conference.

April 26, 1985

EXHIBIT E

Plant Variety Protection Office
United States Department of
Agriculture
AMS-USDA
Room 500 -- National Agricultural
Library Building
Beltsville, Maryland 20705

Re: Plant Variety Protection Certificate Application
Hybrid Inbred Corn Line 78004 -- DPG 8508C-DPC 6941

Dear Sirs:

Dr. Marvin F. Lindsey, breeder of corn line 78004, was from 1970 through July 14, 1982, a full-time employee of Pfizer Genetics, Inc. DeKalb Pfizer Genetics, a general partnership between DeKalb AgResearch, Inc. and Pfizer Genetics, Inc., succeeded on July 15, 1982, to substantially all of the assets of Pfizer Genetics, Inc., including all of the rights to 78004. From July 15, 1982, to the present, Dr. Lindsey has been a full-time employee of DeKalb Pfizer Genetics.

Very truly yours,

James H. Monroe /JHM
James H. Monroe

JHM:aa